What is claimed is:

1. An object conveying system for conveying objects from a first process to a second process, comprising:

a first robot for holding and taking out a container containing objects positioned therein from the first process, and for conveying and positioning the held container at a predetermined position; and

a second robot for holding and taking out an object contained in the container held by said first robot and conveying the held object to the second process, said predetermined position being within an operation range of said second robot.

2. An object conveying system for conveying objects from a first process to a second process, comprising:

a first robot for holding and taking out a container containing objects from the first process, and for conveying and positioning the held container at a predetermined position; and

a second robot with a sensor, for holding and taking out an object contained in the container held by said first robot by recognizing a position and/or an orientation of the object using the sensor, and conveying the held object to the second process, said predetermined position being within an operation range of said second robot.

3. An object conveying system according to claim 1, wherein said first robot changes a position and/or an orientation of the held container for taking out of the object by said second robot.

4. An object conveying system according to claim 2, wherein said first robot changes a position and/or an orientation of the held container, for holding

and taking out of an object by said second robot and/or for recognizing of the position and/or the orientation of the object using the sensor.

5. An object conveying system according to claim 1 or 2, wherein said first robot has a sensor mounted thereon, and holds the container based on a position of the container detected by the sensor.

6. An object conveying system according to claim 1 or 2, wherein when the object is taken out from the container, a signal indicating the number of objects taken out from the container or the number of objects remaining in the container is output to outside of the system.

7. An object conveying system according to claim 1 or 2, wherein when the object is taken out from the container, a signal is output to outside of the system, if the number of objects taken out from the container or the number of objects remaining in the container satisfies a predetermined comparison condition.

8. An object conveying system according to claim 1 or 2, wherein said second robot notifies said first robot that said second robot holds the object in taking out the object.

9. An object conveying system according to claim 1 or 2, wherein said second robot notifies the second process that said second robot holds the object or that said second robot reaches such a region that the second process has to start to make a preparation, in taking out the object.

10. An object conveying system according to claim 1 or 2, wherein said second robot takes out the object from the container, and conveys the

taken object to a temporary placing table on which the taken object is temporally placed.

11. An object conveying system according to claim 1 or 2, wherein said first robot changes a position and/or an orientation of the held container so as to assist said second robot to eliminate an abnormality which is unable to be eliminated by the second robot in taking out the object from the container.

12. An object conveying system for conveying objects from a first process to a second process, comprising:

a first robot for holding and taking out a container from the second process, and for carrying and positioning the held container at a predetermined position; and

a second robot for sequentially holding and taking out objects from the first process and placing the objects in the container held by said first robot according to a predetermined pattern,

wherein said first robot conveys the container in which the objects are placed to the second process.

13. An object conveying system for conveying objects from a first process to a second process, comprising:

a first robot for holding and taking out a container from the second process, and for conveying and positioning the held container at a predetermined position; and

a second robot with a sensor, for sequentially holding and taking out objects from the first process and placing the objects in the container held by said first robot by recognizing a position at which the object is to be placed using the sensor,

wherein said first robot conveys the container in which the objects are

placed to the second process.

14. An object conveying system according to claim 12, wherein said first robot changes a position and/or an orientation of the held container for placing of the object in the container by the second robot.

15. An object conveying system according to claim 13, wherein said first robot changes a position and/or an orientation of the held container for placing of the object in the container by said second robot and/or recognizing of the position in the container at which the object is to be placed using the sensor.

16. An object conveying system according to claim 12 or 13, wherein said first robot has a sensor mounted thereon, and conveys the container to the second process by recognizing a position at which the container is to be stored using the sensor.

17. An object conveying system according to claim 12 or 13, wherein when the object is placed in the container, a signal indicating the number of objects placed in the container or the number of objects remaining in the container is output to outside of said system.

18. An object conveying system according to claim 12 or 13, wherein when the object is placed in the container, a signal is output to outside of the system, if the number of objects placed in the container or the number of objects remaining in the container satisfies a predetermined comparison condition.

19. An object conveying system according to claim 12 or 13, wherein

said second robot notifies said first robot that the object has been placed in the container.

20. An object conveying system according to claim 12 or 13, wherein said second robot takes out an object from a temporary placing table on which the object is temporally placed, and places the object in the container held by said first robot.

21. An object conveying system according to claim 12 or 13, wherein said first robot changes a position and/or an orientation of the held container so as to assist said second robot to eliminate an abnormality which is unable to be eliminated by the second robot in placing the object in the container.

22. An object conveying system according to claim 2, 5, 13 or 16, wherein the sensor comprises a visual sensor.

23. An object conveying system according to claim 2, 5, 13 or 16, wherein the sensor comprises a three-dimensional position sensor.

24. An object conveying method for conveying objects from a first process to a second process, comprising the steps of:

holding and taking out a container containing objects positioned therein from the first process, and conveying and positioning the held container at a predetermined position within an operation range of a second robot, using a first robot; and

holding and taking out an object contained in the container held by the first robot, and conveying the held object to the second process using the second robot.

25. An object conveying method for conveying objects from a first process to a second process, comprising the steps of:

holding and taking out a container containing objects from the first process, and conveying and positioning the held container at a predetermined position within an operation range of a second robot, using a first robot; and

holding and taking out an object contained in the container held by the first robot using a second robot by recognizing a position and/or an orientation of the object using a sensor provided at the second robot, and conveying the held object to the second process by the second robot.

26. An object conveying method according to claim 24, wherein said step of taking out the object by the second robot includes a step of changing a position and/or an orientation of the container held by the first robot.

27. An object conveying method according to claim 25, wherein said step of taking out the object by the second robot by recognizing the position and/or the orientation of the object by the sensor includes a step of changing a position and/or an orientation of the container held by the first robot.

28. An object conveying method according to claim 24 or 25, wherein said step of taking out the container by the first robot includes a step of holding the container based on a position of the container detected by a sensor mounted on the first robot.

29. An object conveying method according to claim 24 or 25, further including a step of outputting a signal indicating the number of objects taken out from the container or the number of objects remaining in the container when said step of taking out the object from the container by the second robot is performed.

30. An object conveying method according to claim 24 or 25, further including a step of outputting a signal, if the number of objects taken out from the container or the number of objects remaining in the container satisfies a predetermined comparison condition when said step of taking out the object from the container by the second robot is performed.

31. An object conveying method according to claim 24 or 25, wherein said step of taking out the object from the container by the second robot includes a step of notifying said first robot that said second robot holds the object.

32. An object conveying method according to claim 24 or 25, wherein said step of taking out the object from the container by the second robot includes a step of notifying the second process that said second robot holds the object or that said second robot reaches such a region that the second process has to start to make a preparation.

33. An object conveying method according to claim 24 or 25, wherein said step of taking out the object from the container and conveying the object to the second process by the second robot includes a step of conveying the object to a temporary placing table on which the taken object is temporally placed.

34. An object conveying method according to claim 24 or 25, further including a step of changing a position and/or an orientation of the container held by the first robot so as to assist the second robot to eliminate an abnormality which is unable to be eliminate by the second robot in taking out the object from the container.

35. An object conveying method for conveying objects from a first process to a second process, comprising:

holding and taking out a container from the second process, and for conveying and positioning the held container at a predetermined position using a first robot;

sequentially holding and taking out objects from the first process and placing the objects in the container held by said first robot according to a predetermined pattern, using a second robot; and

conveying the container in which the objects are placed to the second process by the first robot.

36. An object conveying method for conveying objects from a first process to a second process, comprising:

holding and taking out a container from the second process, and for conveying and positioning the held container at a predetermined position using a first robot;

sequentially holding and taking out objects from the first process and placing the objects in the container held by said first robot using a second robot by recognizing a position at which the object is to be placed using a sensor provided at the second robot; and

conveying the container in which the objects are placed to the second process by the first robot.

37. An object conveying method according to claim 35, further including a step of changing a position and/or an orientation of the container held by the first robot for placing the object in the container by the second robot.

38. An object conveying method according to claim 36, further

including a step of changing a position and/or an orientation of the container held by the first robot for placing the object in the container by the second robot and/or for recognizing the position in the container at which the object is to be placed using the sensor.

39. An object conveying method according to claim 35 or 36, wherein said step of conveying the container to the second process by the first robot includes a step of recognizing a position at which the container is to be stored by a sensor mounted on the first robot.

40. An object conveying method according to claim 35 or 36, further including a step of outputting a signal indicating the number of objects placed in the container or the number of objects remaining in the container when the object is placed in the container.

41. An object conveying method according to claim 35 or 36, further including a step of outputting a signal if the number of objects placed in the container or the number of objects remaining in the container satisfies a predetermined comparison condition when the object is placed in the container.

42. An object conveying method according to claim 35 or 36, further including a step of notifying said first robot that the object has been placed in the container by the second robot.

43. An object conveying method according to claim 35 or 36, further including a step of taking out an object by the second robot from a temporary placing table on which the object is temporally held and placing the object in the container held by the first robot.

44. An object conveying method according to claim 35 or 36, further including a step of changing a position and/or an orientation of the container held by the first robot so as to assist the second robot to eliminate an abnormality which is unable to be eliminate by the second robot in placing the object in the container.

45. An object conveying method according to claim 25, 28, 36 or 39, wherein the sensor comprises a visual sensor.

46. An object conveying method according to claim 25, 28, 36 or 39, wherein the sensor comprises a three-dimensional position sensor.